P. Sabin, et al. U.S.S.N. 10/789,385 Amendment Page 2

In the Specification:

Please insert the following new paragraph on page 16, beginning at line 15:

FIG 5 shows a photograph of the assembled fuel cell stack 10, as described in FIG 1, following sealant encapsulation. As shown, bipolar plates 44, 46, 48, and 50, and external manifolds 80, are encapsulated about the periphery thereof by the sealant 86.

Please amend the paragraph on page 16, lines 16-28 as follows:

FIG 6 shows another preferred embodiment of an external manifold 80 having three ports 82 provided in a primary manifold 84. The external manifold of FIG 6 is assembled by providing a primary manifold tube, hose, or pipe, placing a series of openings through the side wall of the primary manifold and inserting hosing, pipes or tubings for the ports in the openings. Preferably the port tubing inserted into the manifold openings has substantially the same diameter such that the connection between the ports and the primary manifold is fluid tight or is fluid tight after encapsulating the fuel cell with resin. Although any material which is chemically stable to the sealant and the reactants, e.g., oxidant and/or fuel, are suitable for use in the preparation of the external manifold opening, preferred materials are non-conducting resins which have are sufficiently flexible to facilitate stack assembly. Typically preferred manifold materials are selected from silicone, Teflon TEFLON (polytetrafluoroethylene), polyethylene, Tygon-TyGON (polyvinylchloride (PVC)) tubing, butyl rubber, and the like.

Please amend the paragraph on page 21, lines 23-29 as follows:

The assembled components were surrounded by a paper mold. The mold was filled with a two-part silicone (Silastic-SILASTIC (silicone) T2 – Dow Corning) to surround the

P. Sabin, et al. U.S.S.N. 10/789,385 Amendment Page 3

component. A vacuum of 10 inches Hg was pulled through the manifolds simultaneously for approximately 30 sec. drawing the silicone into the edge of each MEA, as well as into the spaces between the manifolds and the other stack components. The assembly and mold were heated in a convection oven (~200F) until the silicone was hardened. The resulting stack was cut from the mold.

Please add the following new paragraph at page 16, line 15:

FIG 5 shows a photograph of the sealed fuel cell stack 10, described in FIG 1. Bipolar plates 44, 46, 48, and 50, and external manifolds 80, are sealed externally by the sealant 86.